

REMARKS

Claims 1, 3, 4, 7, 9-13, 15, 17, 20-22, 25 and 29-33 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

INTERVIEW SUMMARY

The undersigned wishes to express his appreciation to the Examiner for the courtesy of the telephone interview on August 5, 2008, concerning the present application. No agreement was reached as to any allowable claims.

REJECTION UNDER 35 U.S.C. § 112

Claims 1, 3, 4, 7, 9-13, 15, 17, 20-22, 25, and 29-33 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner cited the inclusion of the terminology "resistant to shrinkage" for the aliphatic resin as not being adequately supported in the specification. While the undersigned respectfully disagrees with this conclusion, the objected to language in claims 1 and 13 has been removed merely in the interest of expediting prosecution of the present application.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 3, 4, 7 and 9-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Day (U.S. Pat. No. 5,665,450) in view of the collective teachings of Demeester (U.S. Patent No. 5,885,714), Bain (U.S. Patent No. 4,793,108), Shorr (U.S. Patent No. 3,081,205), and Padden (U.S. Patent No. 5,500,272), and further in view of

Luvisi (U.S. Patent No. 3,534,004). This rejection is respectfully traversed. More particularly, it is respectfully, yet strenuously, asserted that the combination of these references together to form an obviousness rejection is improper and based strictly on hindsight reconstruction.

For example, while Day may show a window that makes use of glass ribbon-reinforced transparent polymer composite material, Day is completely silent on manufacturing the window with one or more metallic, peripheral layers to provide additional strength at the peripheral edge of the window. In the Office Action the Examiner makes the statement:

“However, it is generally well known in the aircraft window manufacture to provide an embedded reinforcing material around the periphery of a window to provide improved strength and rigidity.” (Office Action, pps. 3-4)

The Examiner proceeds to cite Deemester, Bain, Shorr and Padden for the proposition that it would have been obvious to one of ordinary skill in this art to have embedded one or more metal reinforcing sheets around the periphery of an aircraft window, and then makes the “jump” that it would be obvious to do so with the window of Day prior to heating to flow and cure the resin in the window of Day. However, there is no suggestion, or even *hint* of a suggestion, in Day or any of the previously mentioned references, that it would be helpful/possible to interleave one or more metal peripheral layers that have an opening, between layers of a transparent window structure made up of transparent fibers and a transparent resin that has an index of refraction that matches the index of refraction of the transparent fibers.

It is respectfully asserted that it would not have been initially obvious to use one or more metal interlayers with a composite transparent window structure, as recited in the independent claims, because of the obvious improved strength of a composite window panel by itself (i.e., transparent fibers with a transparent resin). Each of the window panels in the Deemester, Bain and Shorr patents cited by the Examiner involve simple plastic window structures, which the examiner will appreciate would almost certainly require significant reinforcing around their peripheral edges. Padden involves a composite layer with a titanium interlayer, but the multi-layer panel in Padden is not a window, nor is there any suggestion in Padden that it might be altered to form a window. With a composite window panel such as is being claimed in the present application, the desirability/need for a peripheral reinforcing structure would not be as immediately apparent to one of ordinary skill in this art. This is because of the significant added strength of a composite window. As evidence of this non-obviousness, the Examiner will note that Day makes no mention of the desirability of including an interleaved metal peripheral reinforcing edge portion as an integral portion of the window. It is also noteworthy that the Examiner has not cited any art involving composite windows that suggest the desirability to incorporate an interleaved, metallic, peripheral, edge-reinforcing structure during the manufacture of the window assembly.

The Examiner also remarks in the Office Action (p. 5) that the claims do not appear to distinguish over a single metallic frame structure which is provided by, for example, a strip of metal for each side of the frame. While the undersigned, again, does not necessarily agree with this determination, merely to expedite prosecution of this application, a minor amendment has been made to claim 1 to more positively point out the

operation that references the peripheral metallic frame portion. This portion of claim 1 is recited below in pertinent part:

*using a plurality of non-fibrous, metal sheets to form a frame structure,
wherein the metal sheets define an a continuous peripheral edge forming an
opening therein;*

It is believed that independent claims 1 and 13 now each clearly define over the cited references, and particularly the Shorr patent mentioned by the Examiner in the Office Action. With regard to Padden, it will be noted that Padden involves using a full layer of titanium as the metallic interlayer, and makes no mention of just forming the metallic interlayer as a peripheral member which only covers a peripheral edge portion of the composite layer of material to which it is assembled.

As to the newly cited patent to Luvisi (U.S. 3,534,004), the Examiner will note that, again, while this reference may discuss specific types of polymeric compositions, and particularly a polycyclic epoxide, there is no suggestion of using this compound in an aircraft window of the type being claimed. More particularly, an aircraft window having a peripheral reinforcing, metallic interlayer, and where the window has a construction of fibers and resin having matching indices of refraction. For at least these reasons, reconsideration and withdrawal of this rejection is respectfully requested.

Claims 13, 15, 17, 20-22, 25 and 29-33 stand rejected as being obvious over Day in view of the collective teachings of Deemester, Bain, Shorr and Padden, and further in view of Luvisi, and further in view of Graff (U.S. Patent No. 3,074,832). The remarks presented above concerning the Day, Deemester, Bain, Shorr and Padden references are equally applicable here. It is most respectfully submitted that the teachings of these references have been used in piecemeal fashion to hindsight reconstruct the claimed

subject matter. For this reason reconsideration and withdrawal of this rejection is also respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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